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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,499	03/09/2001	Kenichi Nishida	39303.20230.00	7445
25224	7590	03/22/2005	EXAMINER	
MORRISON & FOERSTER, LLP			WARREN, DAVID S	
555 WEST FIFTH STREET				
SUITE 3500			ART UNIT	PAPER NUMBER
LOS ANGELES, CA 90013-1024			2837	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/802,499	NISHIDA ET AL.
	Examiner	Art Unit
	David S. Warren	2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 December 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 2-8 is/are allowed.
 6) Claim(s) 1 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 09 March 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 4/11/05

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

As stated in the previous Office Action (June 17, 2004):

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haselton (2,800,827) in view of Lee (5,158,003). The patent to Haselton shows a seesaw-type mass member (36,34) having distinct (i.e., easily observable) weights (30, 32; see col. 2, lines 15 and 23) which are carried by arms 34 and 36. The "lifter" of Haselton is functionally equivalent to applicant's "follower" (col. 2, line 6). As seen in figure 1, the mass member, "pops up" higher than the key when the keys are depressed. The distance between the center of gravity of weight 30 and pivot 27 is shorter than the distance between the center of gravity of weight 32 and pivot 27 (col. 2, paragraph 4). Haselton does not disclose the use of "first and second arms extending substantially horizontally in opposite directions from a pivotal center of the mass member." Lee discloses a seesaw-type mass member (15, 17) having a distinct weight (14) carried by

arm 13. Lee also discloses that a first arm pops up to a level higher than the key when the key is depressed. It would have been obvious to one of ordinary skill in the art to combine the teachings of Haselton and Lee to obtain a substantially horizontal seesaw-type mass member for use in a keyboard. The motivation for making this combination can be found in Lee: "The present invention relates to keys for an electronic musical instrument, which is capable of providing an after-touch effect such that, upon pressing a key, the player feels as if the key is engaged with something and is released immediately." The examiner adds that fig. 1 of Lee provides a compact in-line construction that minimizes the vertical dimension.

Allowable Subject Matter

Claims 2-8 are allowed.

As stated in the previous Office Action, the following is a statement of reasons for the indication of allowable subject matter: Regarding claim 2, the prior art does not disclose inserting weights wherein each combination is set separately from each other. The Examiner interprets "set" (as defined in Applicant's specification) as choosing among several thickness and/or weights to obtain a desired key-touch response. Regarding claim 4, the prior art does not show a mass member with plural insertable weights having plural combinations of weights. Nor does the prior art show plural weight mass member having a stopper for setting pivotal movement. Regarding claims

3 and 6 – 8, reasons for the indication of allowable subject matter was stated in the previous office action (paper no. 6; April 11, 2003).

Response to Arguments

Applicant's arguments filed December 20, 2004 have been fully considered but they are not persuasive. The Applicant argues that the combination of Lee and Haselton would yield an inoperable key action. The Examiner does not concur. One of ordinary skill would certainly think to use a two-weighted "see-saw" mass member as taught by Haselton in a horizontal key action as taught by Lee. While the tone-rods (26) of Haselton are vertical, the electric keyboard art is replete with horizontal tone-rods (e.g., the well-known "Rhodes piano"). Proper tactile feedback (i.e., action) is essential regardless of orientation of "tone-rods."

The Applicant does not find the Examiner's motivation to combine Lee and Haselton availing. Both Lee and Haselton disclose the use of a weight, with inherent inertia, one of ordinary skill would think to combine these teachings since key actions (both horizontal and vertical) provide a two-fold use, 1) to return the key to its original starting position, and 2) to offer an appropriate keyboard-like response when activating each key. One of ordinary skill would think to combine these references to achieve these goals. The Applicant further argues that "Haselton" not concerned with providing after-touch. The Examiner concurs, however, the weights of both Haselton and Lee are used primarily to provide inertial feedback response. The Applicant further argues that

“the feel of the key 10 is not important to Haselton, but rather how the lifter/striker member performs.” To one of ordinary skill, the “feel” of a key is synonymous with performance. In other words, the user of the Haselton keyboard will, in fact, feel the presence and attributes of weights 30 and 32. The Applicant argues that Haselton’s weights are used to “create tone” while Lee’s are used for after-touch effect. The Examiner does not concur. Both Lee and Haselton use the weights as restoring forces (Lee, col. 3, first paragraph; Haselton, col. 2, lines 52 – 57). Finally, the Applicant asserts that one of ordinary skill would “not be motivated to straighten out the lifter portion 36 and the striking portion 34 of Haselton based on Lee to save vertical space, because it would not affect the vertical space.” The lifter/striker of Haselton is essentially a lever. The use of straight levers is ancient. The piano action art is (see for example class 84, subclass 236) is based primarily on the use of levers. The Examiner maintains that one of ordinary skill in the art would think to use a straight lever.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dsw



MARLON T. FLETCHER
PRIMARY EXAMINER